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EXAMINATIONS ON IDAHO AND WEISER NATIONAL FORESTS AND HOLDINGS OF BOISE-PAYETTE LUMBER COMPANY

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Forest Insect Field Station,
Coeur d'Alene, Idaho,
January 23, 1931

MEMORANDUM OF EXAMINATION ON THE IDAHO AND WEISER NATIONAL FORESTS AND THE HOLDINGS OF THE BOISE PAYETTE LUMBER COMPANY

Re: Insect infestations

September 7, 1930, New Meadows, Idaho

Day spent in examination of sample plot established in 1924. This plot is of large mature yellow pine trees that were severely defoliated during an epidemic of the pine butterfly (Neophasia menapia) in 1922 and 1923. Since the establishment of this plot about 24% of the trees have died. The death of some trees occurred as the direct result of the pine butterfly defoliation, while with others the western pine beetle may have been responsible, or at least undoubtedly hastened their death. The data secured from this plot is being worked up at this time and a final report will be submitted this winter.

September 8, 1930

With Messrs. Scribner, Farrell and Sanford, a trip was made by auto to Warren Summit for an inspection of the mountain pine beetle infestation in the lodgepole pine stands of the Idaho National Forest. Side trips were made along the new Forest Service auto way up Grouse Creek, and up the Sasach River above Bergdorf Springs. As we approached Grouse Creek, which is some thirty miles north of McCall, Idaho, new (1930) attacks could be seen in large numbers along the road. This condition continued as far as Warren Summit, which was our destination.

These new attacks were not scattered individuals, but existed in severe epidemic numbers. In many areas the 1930 attack seemed to have taken a large per cent of the remaining green timber. The 1929 attacks, appearing as red tops at the time of this examination, were present in large numbers, with large solid blocks of them to be seen throughout the mountain sides. There were black tops (1928 attacks) scattered throughout the area, but they did not seem to be in very great numbers. There is no doubt but that there has been a very marked increase in the infestation during the past two years. Messrs. Scribner and Farrell state that in 1929 there were not many red tops (1928) to be seen, and were very surprised to find the status of conditions as revealed by the 1929 attacks, which started to fade in June, 1930. Mr. Scribner stated that this year the red tops (1929 attacks) were to be found in large groups, and in many areas practically solid blocks, throughout the central portion of the forest; and that the condition that we had seen extended some 15 miles further. From the open ridge to the north of Wagren Summit a good view of the mountains for a considerable distance was secured, which revealed a very serious condition. It is evident that though a large per cent of the lodgepole pine appears as red tops one can be assured that the 1930 attack more than equals the 1929.

The thought of control for an infestation of this character are of course prohibitive. It would seem that the only economic course to follow would be the marketing of the remaining green forest as rapidly as possible. There is apparently no question but that this outbreak will continue to spread throughout the remaining uninfested lodgepole pine stands of the forest.

Equal to the destruction of the timber volumes at stake is the fire hazard which is created, that will increase the seriousness of future fires and the cost of their suppression. The utilization of all uninfested lodgepole is recommended.

September 9, 1930

With Messrs. Sanford and Koziol, an examination was made of the Douglas Fir Tussock Moth infestation at Price Valley, Tamerack, Idaho. In this area there had been some 1930 feeding by the larvae, though it was not very severe. Many dead larvae could be found at the base of many trees, which is either the result of starvation or a wilt disease. Many pupal cases were in evidence, but no egg masses were found. A large number of pupal cases were examined, but in no instance could the emergence of an adult moth be accounted for, and in nearly every one there were parasitic larvae. It would surely seem that this outbreak had been very successfully reduced through the activity of this very beneficial insect that has been determined as a species of Tachinidae. This condition is also true of outbreaks of this insect in the vicinity of Northport, Washington. The Douglas Fir Tussock Moth is indeed a killer, and its economic importance must be fully appreciated Though it is rather apparent that outbreaks of this insect will be reduced in a few years through natural agencies, a large per cent of the infested timber is destroyed during this period.

From Tamarack a trip was made to the yellow pine areas near the Hornet Creek Ranger Station, Weiser National Forest. In this area there is an infestation of the western pine beetle (Dendroctonus brevicomis) that may be slightly above the annual increment of the stand. The infestation is scattered over a large area, which would entail a tremendous cost for control. In consideration of all factors associated with this infestation, control measures are not recommended at this time. However, this area should be kept under careful observation, and in the event of any material increase in the annual loss control measures should be promptly instituted.

The infestation of the mountain pine beetle in the lodgepole pine stand of the West Mountain Region of the Weiser National Forest was discussed with local officers. It was stated that there was an infestation which had already destroyed approximately 90 per cent of a stand that had very little if any market value. In view of the severity of the infestation, I decided that unless there were valuable timber stands adjacent that were in danger of infestation an examination would be of no value, as control measures would be an uneconomical procedure. Mr. Sanford stated that immediately to the south of this infestation there is such an area (Grass Valley) on the Payette Forest, and it was decided to determine the status of conditions within this area before planning an examination of the West Mountain Region. Supervisor Rice of the Payette Forest was called, and stated that the bugs had taken over the Grass Valley area some two years ago, so further consideration of this infestation was dropped.

September 10, 1930

Accompanied by Messrs. Shellworth and Conrad of the Boise-Payette Lumber Company, and Sanford, Scribner and Farrell of the Forest Service, I examined an outbreak of the Tussock Moth on Hill Creek, New Meadows Valley. This area had been examined by Mr. Balch of this station, in 1929, who at that time reported the outbreak to have been controlled by parasitic insects. This forecast was fully sustained, as there had been very little 1930 feeding and no new pupal cases or egg masses were observed. It would seem that the infestation on this area is about one year older than the outbreak examined at Price Valley.

Prior to this examination a trip was made to the Brundage Mountain lookout station, where we were the guests of Mr. Shellworth at breakfast. This station is equipped with complete weather recording instruments, which were both interesting and educational.

Proposed examination of the Goodwich Creek area, Weiser National Forest, was abandoned due to severe rain storm with snow in the mountains.

CONCLUSIONS

The outbreak of the mountain pine beetle within the lodgepole pine forests of this region presents a serious economic situation. It is apparent that this epidemic is firmly established throughout the lodgepole forests of central Idaho, and within the next few years a large per cent of the mature timber will be destroyed. In addition to the economic loss of this timber, though perhaps in some areas it may not have a very high market value at this time, there is the fire hazard created by this tremendous accumulation of debris that will in the next 30 years add materially to the destructiveness of fires and the cost of

their suppression. However, this condition exists, and at this time its prevention is economically impossible.

The western pine beetle infestation within the yellow pine stands visited during this examination did not appear to be above a normal condition. However, it is possible that more serious conditions exist than those observed.

It is gratifying to note the apparent cessation in epidemics of the Douglas Fir Tussock Moth. This insect is peculiar in that the first record that we have of it as an economic enemy of forests was reported only some few years ago from Jarbridge, Nevada. Since that time outbreaks have occurred on the Weiser, Idaho, and Boise National Forests, and in the vicinity of Northport, Washington. It is believed that this insect is indigenous to this region, and that the present outbreaks have resulted through the breaking down of certain biological factors that had previously held the destructive pest in check. The female moths are wingless, which limits to a marked degree the spread of the epidemics. This perhaps explains why the outbreaks occur as spots (rather large ones, of course), with rather distinct lines of demarcation. It is believed that the young larvae may be carried for certain distances by air currents, buoyed by silken threads by which they often hang suspended from the limbs.

Respectfully submitted,

James L. Evenden

Entomologist